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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,738	06/07/2001	Toyoaki Kishimoto	450100-03276	9194
20999	7590	05/12/2005	EXAMINER PHAN, TAM T	
FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151			ART UNIT 2144	PAPER NUMBER

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/876,738

Applicant(s)

KISHIMOTO, TOYOAKI

Examiner

Tam (Jenny) Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-19 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 07 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

1. Amendment received 02/03/2005 (February 03, 2005) has been entered. Claims 1, 6, 8, 10, 13, 15, and 18 have been amended.
2. Claims 1-19 are presented for examination.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
4. Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a translation of the foreign application should be submitted under 37 CFR 1.55 in reply to this action.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of copending Application No. 09/862,656 in view of Kuwamoto et al. (U.S. Patent Number 5,617,518).

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7. Application 09/876,738 is an obvious variation of copending Application No. 09/862,656. In this case the invention as described on claims 1-19 of the instant application is unpatentable under the judicially created doctrine of "obviousness-type" double patenting with respect to claims 1-23 of the copending Application No. 09/862,656. Claims 1-19 of the instant application have substantially the same elements of claims 1-23 of the patent. The difference is the element of "an application program or a data file stored in said storage means having a smallest activation count is saved to an external recording medium". This difference between claims 1-19 of the instant application and the pending application is not suffice to render the invention of claims 1-19 of the instant application patentably distinct and/or therefore substantially the same invention and/or a mere obvious variation of the copending Application No. 09/862,656.
8. Accordingly, it would have been obvious to one of ordinary skill in the computer networking art to conclude that the invention defined in the claim at issue is an obvious variation of the invention defined in a claim in the co-pending application because moving or removing the least frequently used data as indicated by having a smallest activation count, is taught in Kuwamoto et al. (U.S. Patent Number 5,617,518). See Figure 15, column 3 line 62-column 4 line 9, column 12 line 50-column 13 line 3. In addition, refer to prior art of record described in the Conclusion section of this office action and form PTO-892 for the well-known teaching of moving or removing data having the smallest count (data which is the least frequently used) to allocate space for new incoming data.
9. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Instant Application 09/876,738	Pending Application 09/862,656
<p>1. An information-processing apparatus comprising: storage means for storing application programs and data files; processing means for activating an application program stored in said storage means to carry out required processing; communication means for communicating data with an external server; and control means for controlling said communication means and said storage means; wherein said control means controls said communication means and said storage means in such a manner that when an application program is downloaded from said server connected by said communication means, if said storage means has a free storage area left in which said application program is allowed to be installed, said application program downloaded from said server is installed in said storage means; but if said storage means has no free storage area left in which said application program is allowed to be installed, <i>an application program or a data file stored in said storage means having a smallest activation count is saved to an external recording medium by way of said communication means in order to allocate a free storage area in said storage means and then said application program transmitted from said server is installed in said storage means.</i></p> <p>2. The information-processing apparatus according to claim 1, further comprising: activation-history management means for storing information on an activation history for each application program and for updating said information on an activation</p>	<p>1. An information-processing apparatus comprising: storage means for storing application programs and data files; calculating means for activating an application program stored in said storage means to carry out predetermined processing; media drive means for recording and playing back information into and from an external recording medium; and control means which controls said media-drive means and said storage means when said external recording medium for recording an application program is mounted on said media drive means so that: when said storage means includes a remaining free storage area with a size large enough for accommodating said application program recorded in said external recording medium, said application program recorded in said external recording medium is installed in said storage means; but when said storage means includes a remaining free storage area with a size not large enough for accommodating said application program recorded in said external recording medium, on the other hand, <i>an application program or a data file stored in said storage means is saved to said external recording medium in order to allocate a free storage area in said storage means and then said application program recorded in said external recording medium is installed in said storage means.</i></p> <p>2. An information-processing apparatus according to claim 1, wherein said information-processing apparatus further has an activation-history management means for storing activation history information for each application program</p>

history for a specific application program upon activation of said specific application program by said processing means; wherein said control means selects an application program to be saved to said external recording medium on the basis of said information on an activation history.

3. The information-processing apparatus according to claim 1, wherein said storage means is a non-volatile storage area.

4. The information-processing apparatus according to claim 1, wherein if an application program or a data file saved in said external recording medium exists at completion of use of an active application program downloaded from said server, said control means controls operations carried out by said communication means and said storage means to delete said active application program from said storage means in order to restore said saved application program or saved said data file from said external recording medium to said storage means by way of said communication means.

5. The information-processing apparatus according to claim 1, wherein said processing means activates an application program upon installation of said application program downloaded from said server into said storage means.

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on said storage means and for updating said activation history information for a specific application program upon activation of said specific application program by said calculating means, and said control means selects an application program to be saved to said external recording medium on the basis of said activation history information.

3. An information-processing apparatus according to claim 1 wherein said storage means is a non-volatile storage area.

4. An information-processing apparatus according to claim 1 wherein, when an application program or a data file has been saved in said external recording medium being dismounted from said media drive means, said control means controls said media-drive means and said storage means to uninstall an application program installed from said external recording medium into said storage means in order to restore said installed application program to said external recording medium and to restore said application program or said data file saved in said external recording medium to said storage means.

5. An information-processing apparatus according to claim 1 wherein said calculating means activates an application program upon installation of said application program from said external recording medium into said storage means.

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Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (U.S. Patent Number 6,360,364), hereinafter after referred to as Chen in view of Kanevsky et al. (U.S. Patent Number 6,393,470), hereinafter referred to as Kanevsky, and further in view of Kuwamoto et al. (U.S. Patent Number 5,617,518), hereinafter referred to as Kuwamoto.

12. Chen disclosed an information-processing apparatus comprising: storage means for storing application programs and data files (Abstract, Figure 6 sign 252); processing means for activating an application program stored in said storage means to carry out required processing; communication means for communicating data with an external server (Figure 5 signs 242, 244, column 3 lines 40-52, column 5 lines 33-50, column 6 lines 36-48); and control means for controlling said communication means and said storage means (column 5 lines 13-19, column 8 lines 45-53); wherein said control means controls said communication means and said storage means in such a manner that when an application program is downloaded from said server connected by said communication means, if said storage means has a free storage area left in which said application program is allowed to be installed, said application program downloaded from said server is installed in said storage means (Abstract, Figures 6 and 7); but if

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said storage means has no free storage area left in which said application program is allowed to be installed, the information processing apparatus will determine whether expansion storage means are available and if yes, then said application program transmitted from said server is install in said storage means (Abstract, Figures 6 and 7).

13. Chen taught the invention substantially as claimed. However, Chen did not expressly teach that if said storage means has no free storage area left in which said application program is allowed to be installed, *an application program or a data file stored in said storage means is saved to an external recording medium by way of said communication means in order to allocate a free storage area in said storage means* and then said application program transmitted from said server is installed in said storage means.

14. Chen suggested exploration of art and/or provided a reason to modify the information-processing apparatus with the storage allocation feature to increase resources (column 1 lines 26-35, column 2 lines 21-28, column 3 lines 17-27).

15. Kanevsky disclosed an information processing apparatus for freeing storage means in portable devices by saving an application program or a data file stored in said storage means an external recording medium [server storage] by way of said communication means in order to allocate a free storage area in said storage means (Title, Abstract, Figure 1, column 8 lines 13-25).

16. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the information processing apparatus of Chen with the teachings of Kanevsky to include the storage allocation of moving application programs or files to an external medium in order to facilitate the installation process since if the

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memory space available is insufficient to accommodate a new application program, installation will fail (Chen, column 3 lines 17-30). In situation like this, users must either delete one or more applications programs or files from the storage means to free up resources for the new application program (Chen, column 3 lines 17-30).

17. The combination of Chen and Kanevsky taught the invention substantially as claimed, however, the combination of Chen and Kanevsky did not teach saving application or data file *having a smallest activation count* in order to allocate a free storage area.

18. Chen suggested exploration of art and/or provided a reason to modify the combined information-processing apparatus of Chen and Kanevsky with additional storage allocation features to allocate space for new data more sufficiently (column 1 lines 26-35, column 2 lines 21-28, column 3 lines 17-27).

19. Kuwamoto disclosed a system having at least one information processing apparatus has storage means (i.e. hard disc drive) for storing a plurality of programs wherein when an area in the storage means to store the new program is insufficient, the program whose use frequency is the smallest (smallest reference counter) is deleted to allocate space for the new program (Figure 15, column 3 line 62-column 4 line 9, column 12 line 50-column 13 line 3).

20. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the combined information processing apparatus of Chen and Kanevsky with the teachings of Kuwamoto to include allocating storage space based on the least frequently used data (data having smallest activation count) in order to prevent users from not having to continuously re-install or re-store programs back to

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the storage means when users need to access these moved/deleted program (Chen, column 3 lines 22-30).

21. Regarding claim 2, Kanevsky disclosed an information-processing apparatus further comprising activation-history management means for storing information on an activation history for each application program and for updating said information on an activation history for a specific application program upon activation of said specific application program by said processing means (Figure 4, column 2 lines 18-38, column 6 lines 42-49); wherein said control means selects an application program to be saved to said external recording medium on the basis of said information on an activation history (Figure 3, Abstract, column 8 lines 13-25).

22. Regarding claim 3, Chen disclosed an information-processing apparatus wherein said storage means is a non-volatile storage area (column 8 lines 19-31).

23. Regarding claim 4, Chen disclosed an information-processing apparatus wherein if an application program or a data file saved in said external recording medium exists at completion of use of an active application program downloaded from said server, said control means controls operations carried out by said communication means and said storage means to delete said active application program from said storage means in order to restore said saved application program or saved said data file from said external recording medium to said storage means by way of said communication means (column 2 line 57-column 3 line 9, column 3 lines 17-30).

24. Regarding claim 4, Chen disclosed an information-processing apparatus wherein said processing means activates an application program upon installation of said

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application program downloaded from said server into said storage means (Figure 6, column 8 lines 4-11).

25. Regarding claim 6, Chen and Kanevsky disclosed a server comprising: communication means for carrying out communications of data (Chen, Abstract, Figure 5 sign 246); downloaded-data storage means for storing a variety of application programs to be downloaded (Chen, Figure 5 sign 240I); saved-data storage means (Kanevsky, Figure 1 sign 112); and control means for controlling said communication means, said downloaded-data storage means, and said saved-data storage means (Chen, Figure 5 signs 242, 244); wherein when said server receives a download request from an information processing apparatus connected to said server via said communicating means for carrying out communications of data (Chen, Figures 6-7, column 3 lines 40-52), said control means transmits an application program stored in said downloaded-data storage means to said information processing apparatus (Figures 6-7, column 3 line 64-column 4 line 16) and when said server receives a saving request from said information apparatus, said control means stores an application program or a data file transmitted from said information processing apparatus in said saved-data storage means as saved data (Kanevsky, Abstract, Figure 1).

26. Regarding claim 7, Chen and Kanevsky combined disclosed an information processing apparatus for "on-demand" downloading and installation application programs from a remote server as well as migrating existence application programs or files to the remote server to allocate space for the new application programs (Refer to rejection above for details). Examiner takes Official Notice (see MPEP § 2144.03) that "charging means" for on-demand downloading/installing of digital contents and

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"charging means" for storage resources in a computer networking environment was well known in the art at the time the invention was made. Refer to PTO-892 for teachings of charging means for digital contents and storage resources.

27. Since applicant did not traverse any/all official notice taken toward the "charging means" limitations as presented in the previous office action (repeated above for record purposes), the Examiner presumes that applicant acquiesced the limitations of the "charging means" for on-demand downloading/installing of digital contents and "charging means" for storage resources in a computer networking environment was well known in the art at the time the invention was made.

28. Regarding claim 8, the information communication system corresponds directly to the information-processing apparatus and the server of claims 1 and 6, and thus is rejected using the same rationale.

29. Regarding claim 9, the information communication system corresponds directly to the server of claim 7, and thus is rejected using the same rationale.

30. Regarding claims 10-12, the information providing method corresponds directly to the server of claims 6-7, and thus these claims are rejected using the same rationale.

31. Regarding claims 13-14, the information providing method corresponds directly to the server of claims 6-7, and thus these claims are rejected using the same rationale.

32. Regarding claims 15-17, the information-processing program encoded on a computer readable medium corresponds directly to the information-processing apparatus of claims 1-2 and 4, and thus these claims are rejected using the same rationale.

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33. Regarding claims 18-19, the information providing program encoded on a computer readable medium corresponds directly to the server of claims 6-7, and thus these claims are rejected using the same rationale.

34. Since all the limitations of the claimed invention were disclosed by the combination of Chen and Kanevsky, claims 1-19 are rejected.

Response to Arguments

35. Applicant's arguments received on 02/03/2005 with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

36. As the rejection reads, Examiner asserts that the combination of these teachings render the claimed invention obvious.

Conclusion

37. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

38. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

a. Rodriguez (U.S. Patent Number 6,748,491) disclosed a system, computer program product and method for designing a cache wherein a cache may comprise one or more stacks of cache entries. Stacks may be arranged in an array from most frequently used to least frequently used. The stack associated with the highest frequency count may be located at the highest level of the array and the stack associated with the lowest frequency count may be located at the lowest level of the array. The cache entries in each particular stack may be arranged from most recently used to least recently used based on a logical time stamp associated with each particular cache entry. The logical time stamp may indicate the time the information, e.g., data, in the associated cache entry was requested. Upon the storing of a new cache entry in a particular stack, a cache entry located at the least recently used stack position may be evicted. When the cache entry is evicted, the information, e.g., data, associated with the evicted cache entry may be discarded.

b. Forin (U.S. Patent Number 6,360,220) disclosed a removal and replacement procedure for removing and replacing entries in an indexed computer data structure according to an embodiment of the present invention. The removal and replacement procedure may be invoked by or after the insertion procedure when the hash table is full and a thread attempts to insert a new entry in the table. In the illustrated example, since the table is being used to cache memory handles used by multiple threads in I/O operations, the removal and

replacement procedure preferably removes an entry that is not likely to be used in the near future. Accordingly, removal may be based on any number of criteria that indicate whether an entry is likely to be needed. For example, a randomly selected entry, an entry selected by use of a roving pointer, the least-used entry, the least-frequently-used entry, or the least-recently-used entry may be removed. In the illustrated embodiment, the removal and replacement procedure removes entries based on the time stamp value stored in the time stamp field of each entry, which indicates the least-recently-used entry.

39. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam (Jenny) Phan whose telephone number is (571) 272-3930. The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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May 4, 2005



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